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| 10/759,184      | 01/20/2004  | Michael Alan Miles   | 011765-0307460      | 7708             |

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                               |                                     |  |
|------------------------------|-------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/759,184 | Applicant(s)<br>MILES, MICHAEL ALAN |  |
|                              | Examiner<br>Jae U. Yu         | Art Unit<br>2185                    |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

The examiner acknowledges the applicant's submission of the amendment dated 2/12/2007. At this point claims 1-51 are pending in the application, wherein claims 15-51 were elected by the applicant on 8/17/2006.

#### ***Restriction Requirement***

The applicant requests reconsideration of the restriction requirement. However, claims 1-14 (Group 1) are classified in a different subclass than claims 15-51 (Group 2) are, and the group 1 and the group 2 are subcombinations unusable together in a single combination each with separate utility (Refer to the "Requirement for Restriction/Election" dated 6/26/2006). Thus, the groups require a different filed of search, and restriction requirement is proper and is made final.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 15-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Teo et al. (US 2003/0002190).

2. **Independent claims 15, 22, 27, 32, 48 and 51** disclose; "(A) positioning the write element **[Element 15, Figure 6]** over substantially the whole of a track on the storage medium, (B) writing a complete full width logic field **["S/F" 32 written on a track, Figure 6]** of a servo frame to said track with the write element,

(C) writing a first portion of the position field **[Writing "PLL Field" 28, Figure 8]** of said servo frame to a first part of said track with the write element,

(D) moving the write element relative to the storage medium such that a second portion of said position field **[The storage medium rotates in the direction of the arrow to align the write element with the "User Data" 26, Figure 8]** of said servo frame of said track can be written at a position that is at least spaced laterally of the track from said first portion **["PLL Field" 28, Figure 6]**, (E) during the movement in step (D), reading at least a portion of at least one of (i) said logic field of said servo frame of said track and (ii) a logic field of a servo frame of another track **[Reading the next "S/F" 32, Figure 9]**, in order to allow said portion of the logic field to be verified,

(F) writing said second portion **[Writing "User Data" 26, Figure 8]** of said position field of said servo frame of said track at a position that is at least spaced laterally of the track from said first portion **["PLL Field" 28, Figure 8]** with the write element, and

(G) repeating steps (A) to (F) as required for subsequent tracks **[Paragraph 11]** on the storage medium.

3. **Independent claims 35 and 37** disclose; "(A) positioning the write element **[Element 15, Figure 6]** over substantially the whole of a track on the storage medium, (B) writing a certification pattern **["writing a bit pattern to the track", Paragraph 7]** to a data area of said track with the write element",
- (C) repositioning the write element **[rotation causes write element reposition, Figure 8]**, (D) reading at least a portion of said certification pattern using **["reading the bit pattern", Paragraph 8]** the read element in order to allow the integrity of said data area to be checked **[checking the bit error rate, Paragraph 9]**, and
- (E) repeating steps (A) to (D) as required for subsequent tracks **[Paragraph 11]** on the storage medium.

4. **Independent claims 38 and 45** disclose; "(A) positioning the write element **[Element 15, Figure 6]** over substantially the whole of a track on the storage medium, (B) writing a complete full width logic field **["S/F" 32 written on a track, Figure 6]** of a servo frame to said track with the write element,

(C) writing a first portion of the position field [**Writing a first portion of "PLL Field" 28, Figure 8**] of said servo frame to said track with the write element,

(D) writing a certification pattern [**"writing a bit pattern to the track", Paragraph 7**] to a data area of said track with the write element,

(E) moving the write element relative to the storage medium to a position over said track such that a second portion of said position field [**The storage medium rotates in the direction of the arrow to align the write element with the second portion of the "PLL Field", Figure 8**] of said servo frame of said track can be written at a position that is at least spaced laterally of the track from said first portion, (F) during the movement in step (E), reading a portion of at least one of (i) said logic field of said servo frame of said track and (ii) a logic field of a servo frame of another track [**Reading the next "S/F" 32, Figure 9**], in order to allow said portion of the logic field to be verified",

(G) writing said second portion of said position field [**Writing the second portion of the "PLL Field", Figure 8**] of said servo frame of said track at a position that is at least spaced laterally of the track from said first position [**The "first portion" of the "PLL Field", Figure 8**] with the write element,

(H) reading at least a portion of said certification pattern [**"reading the bit pattern", Paragraph 8**] using the read element in order to allow the integrity of said data area to

be checked [**checking the bit error rate, Paragraph 9**], and (I) repeating steps (A) to (H) as required for subsequent tracks [**Paragraph 11**] on the storage medium.

5. **Claims 17, 29 and 36** disclose, “repeating steps (B) and (C) as required for further servo frames of said track prior to carrying out step (D) and then repeating steps (D) to (F) as required for said further servo frames [**Paragraph 11**]”.

6. **Claims 18 and 30** disclose, “carrying out steps (A) to (G) for at least all tracks in a user data area of the storage medium [**Paragraph 11**]”.

7. **Claims 19, 24, 42 and 46** disclose, “reading a position field of a servo frame of another track [**reading a “ID Data field” (Figure 4) of the next “S/F” (Figure 9)**] whilst moving the write element in step (D)”.

8. **Claims 20, 25, 31, 34, 43 and 47** disclose, “the position field is demodulated to provide a position error signal [**the “ID Data field” comprising digital data encoded with a grey code identifying the “track number” and a “position error signal”, Paragraph 56**] that is used to control the movement of the head”.

9. **Claims 21, 26, 41 and 44** disclose, “the position fields/logic fields of at least all tracks [**Paragraph 11**] in a user data area of the storage medium are read”.

10. **Claim 39** discloses, "said previously written logic field is written in a first pass [**"Write" element, Figure 6**] of the head over the storage medium and is read in a second pass of the head [**"Read" element following the "Write" element, Figure 6**] over the storage medium".

11. **Claim 40** discloses, "a first portion of said position field is written [**Writing a first portion of "PLL Field" 28, Figure 8**] in said first pass of the head over the storage medium and a second portion of said position field is written [**Writing the second portion of the "PLL Field", Figure 8**] in said second pass of the head over the storage medium".

12. **Claim 49** discloses, "the read element has a width [**Element 11, Figure 6**] that is substantially equal to the pitch [**Element 33, Figure 6**] of the tracks of a said storage medium".

13. **Claim 50** discloses, "the separation between the read and write elements is such that the read element can read the entire previously written logic field [**reading "S/F", Figure 13**] of a servo frame of a track of the storage medium whilst the write element is moving towards the position where it writes at least a portion of a position field [**moving towards the "PLL Field" of the previous track, Figure 13**] of a servo frame of another track of the storage medium".



14. **Claims 16, 23, 28 and 33** disclose, “the reading in step (E) takes place during said longitudinal movement [**the arrow representing the longitudinal movement, Figure 7]**”.

### ***Arguments Concerning Prior Art Rejections***

#### **1<sup>st</sup> Point of Argument**

Regarding independent claims 15, 22, 27, 32, 35, 37, 38, 45, 48 and 51, the applicant argues that Teo fails to teach servo track writing. The applicant supports his/her argument by stating that Teo's apparatus relates to normal read/write operations instead of servo track writing. However, since a hard disk is a “servomechanism” (“A control system in which the final output is mechanical movement”, Microsoft Computer Dictionary, Fifth Edition), the examiner interprets the read/write operations of a hard disk as “servo track writing”.

Further, the applicant argues that Teo fails to teach a certification pattern and supports his/her position by the same reasons above. The examiner directs the applicant's attention to the corresponding claim rejections above.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

A. Claims No Longer in the Application

Claims 1-14 were withdrawn from consideration as a result of the applicant's election dated 8/17/06.

B. Claims Rejected in the Application

Claims 15-51 have received a second action on the merits and are subject of a second action final.

C. Direction of All Future Remarks

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jae Un Yu who is normally available from 9:00 A.M. to 5:30 P.M. Monday thru Friday and can be reached at the following telephone number: (571) 272-1133.

If attempts to reach the above noted examiner by telephone are unsuccessful, the Examiner's supervisor, Sanjiv Shah, can be reached at the following telephone number: (571) 272-4098.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

5/10/2007

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